

Gnedenko, B. V.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Gnedenko, B. V.	"Mikhail Vasil'yevich Ostrogradskiy" (popular scientific work)	Institute of Mathematics, Academy of Sciences Ukrainian SSR

SO: W-30604, 7 July 1954

GNEDEKO, B. V.

\*Gnedenko, B. V., and Kolmogorov, A. N. Limit distributions for sums of independent random variables. Translated and annotated by K. L. Chung. With an Appendix by J. L. Doob. Addison-Wesley Publishing Company, Inc., Cambridge, Mass., 1954. ix+264 pp. \$7.50.

This is a translation of the authors' *Predel'nye raspredeleniya dya summ nezavisimyh sluchaynykh velichin* [Gosstatizdat, Moscow, 1949; these Rev. 12, 839] with certain alterations and additions as noted below. Because of an error discovered in §32, Theorems 3 and 5 of §32 and property 1 of §36 were omitted; the matter is discussed in Appendix II. In §§46-47 improvements from the Hungarian translation [Akadémiai Kiadó, Budapest, 1951; these Rev. 14, 294] are incorporated. Appendix I by J. L. Doob contains further remarks on some of the topics of Ch. 1. The translator has also corrected minor misprints and annotated the text. He wishes to call attention to the following error: The footnote on p. 16 should read: The symbol  $A \setminus B$  denotes the set of points in  $A$  but not in  $B$ .

4

GNEDENNO, B.

PHASE X TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 697 - X

BOOK

Call No.: AF667270

Author: GNEDENNO, B.

Full Title: COURSE IN THE THEORY OF PROBABILITY, 2nd ed., rev.

Transliterated Title: Kurs teorii veroyatnostey. izd. 2-oe, isprav.  
1 dop.

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of Technical and Theoretical  
Literature

Date: 1954

No. pp: 441

No. of copies: 15,000

Editorial Staff

Contributors: A. N. Kolmogorov and A. Yu. Khinchin

PURPOSE AND EVALUATION: Approved by the Main Administration of  
Universities and Economic and Juridical Colleges of the Ministry  
of Higher Education as a textbook for universities. Unlike  
the Russian textbooks of A. A. Markov, S. Bernstein and others,  
published before 1950, as well as the American textbook of  
W. Feller An Introduction to Probability Theory and its  
Applications, Gnedenno's textbook is the only one written  
on Kolmogorov's foundation of the theory of probability.

1/6

AID 697 - X

Kurs teorii veroyatnostey. Izd. 2-oe, isprav. 1 dop.

Table of Contents:

Foreword to the first and second editions	Page 7-8
Introduction	9-14
Ch. I. Concept of Probability	15-70
Ch. II. Sequence of Independent Trials	71-109
Ch. III Markov's Chains	
Ch. IV Random Variables and Functions of Distribution	117-115
Ch. V Numerical Characteristics of Random Magnitudes	156-183
Ch. VI Law of Large Numbers	184-207
Ch. VII Characteristic Functions	208-240
Ch. VIII Classical Theorem of Limits	241-250
Ch. IX Theory of Unlimited Divisible Laws of Distribution	257-276
Ch. X Theory of Stochastic Processes	277-321
Ch. XI Elements of Statistics	322-359
Brief Survey of History of Theory of Probability	360-388
Table of Magnitudes of Function	

$$(x) = \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}}$$

36

389

Kurs teorii veroyatnostey. Izd. 2-oe, isprav. 1 dop. AID 697 - X

Table of Magnitudes of Function

$$\phi(x) = \frac{1}{\sqrt{2\pi}} \int_0^x e^{-\frac{z^2}{2}} dz$$

Page  
390

Table of Magnitudes of Function

$$P_k(a) = \frac{a^k e^{-a}}{k!}$$

391-392

Table of Magnitudes of Function

$$\sum_{m=0}^k \frac{a^m e^{-a}}{m!}$$

393-394

4/6

Kurs teorii veroyatnostey. Izd. 2-oe, isprav. i dop. AID 697 - X

Table of Magnitudes of Function

Page  
395-398

$$P(x) = \frac{1}{2^{\frac{k-2}{2}} \Gamma\left(\frac{\kappa}{2}\right)} \int_x^{\infty} z^{k-1} e^{-\frac{z^2}{2}} dz$$

Table of Magnitude of Function

399-400

$$S(x) = \frac{\left(\frac{n}{2}\right)}{\sqrt{(n-1)\pi} \Gamma\left(\frac{n-1}{2}\right)} \int_{-\infty}^x \left(1 + \frac{z^2}{n-1}\right)^{-\frac{n}{2}} dz$$

5/6

Kurs teori1 veroyatnostey. Izd. 2-oe, isprav. i dop.

AID 697 - X

Table of Magnitudes of Function

Page

$$K(x) = \sum_{k=-\infty}^{\infty} (1)^k e^{-2k^2 x^2}$$

401-402

No. of References: Total 106, Russian 88 (1901-1952)

Facilities: Names of many Russian scientists are mentioned.

6/6

GHEDENKO, B.V., GIKHMAN, I.I.

Development of the theory of probabilities in the Ukraine. Pratsi,  
Kyiv, un.2:59-94 '54. (MLRA 10:1)  
(Ukraine--Probabilities--Study and teaching)



ONEDENKO, B. V.

Limit theorems for sums of independent elements and Markov chains.  
Ukr.mat.shur. 6 no.1:5-20 '54.

(Probabilities)

(MLRA 9:1)

GNEDENKO, B.V.

YUSHKEVICH, A.P. (reviewer)

"Mikhail Vasil'evich Ostrogradskii." B.V.Gnedenko. Reviewed by  
A.P.Iushkevich. Usp.mat.nauk 9 no.1:155-158 Jan-F '54.

(MLRA 7:2)

(Ostrogradskii, Mikhail Vasil'evich, 1801-1861)

(Gnedenko, Boris Vladimirovich, 1912- )

GNEDENKO, B.V.; KALUZHININ, L.A.

Mathematical activities in the German Democratic Republic.

Usp.mat.nauk 9 no.4:133-154 '54.

(MLRA 8:1)

(Germany, East--Mathematics) (Bibliography--Mathematics)

GNEDENKO, B.

"Complete collected works." P.L.Chebyshev. Reviewed by B.Gnedenko.  
Usp.mat.nauk 9 no.4:263-266 '54. (MIRA 8:1)  
(Chebyshev, Pafnutii L'vovich, 1821-1894)

Gnedenko, B. V. A local limit theorem for densities.  
 Doklady Akad. Nauk SSSR (N.S.) 95, 5-7 (1934).  
 (Russian)

Let  $\xi_1, \xi_2, \dots$  be random variables with a common distribution function. Let  $s_n = \sum_{j=1}^n (\xi_j/B_n) - A_n$ , and let  $p_n$  be the distribution density of  $s_n$ . Let  $p$  be the distribution density of some stable distribution. Then if (1) the distribution of  $\xi_1$  is in the domain of attraction of the  $p$  distribution, and if (2) for some  $m$  the distribution of  $\sum_{j=1}^m \xi_j$  satisfies a Lipschitz condition, it is proved that  $p_n$  exists, for large  $n$ , that  $A_n/B_n$  can be chosen to make  $s_n$  have asymptotically the  $p$  distribution, and, with this choice,  $\sup_x |p_n(x) - p(x)| \rightarrow 0$ . A trivial converse is easily formulated. If conditions (1) and (2) are satisfied, and if  $\xi_1$  has a finite moment of order  $k \geq 3$ , an expansion of  $p_n$  is given with an error term of order  $o(n^{-(k-2)/3})$ .

J. L. Doob (Urbana, Ill.).

GNEDENKO, B V

N/5  
611.49  
.65

GNEDENKO, B V

ON A PROBLEM OF THE COMPARISON OF TWO EMPIRICAL DISTRIBUTIONS, BY

B. V. GNEDENKO AND E. L. RVACHEVA, TRANSLATED BY H. P. EDMUNDSON.

T-45. SANTA MONICA, CALIF., RAND CORP., 1955.

7 L.

TRANSLATED FROM THE "REPORTS OF THE ACADEMY OF SCIENCES USSR, 1952,

V. 82, NO. 4, PP. 513-516."

CIA CONTROL NO. V 6926.

G. NEDENKO, B. V.

2000

Gnedenko, B. V. Aleksandr Yakovlevich Hincin, (On  
his sixtieth birthday.) Uspehi Mat. Nauk (N.S.) 10,  
no. 3(65), 197-212 (1955). (Russian)  
A list of Hincin's published papers is included.

1 - R/V

①

# 1/K

GNEDENKO, B. V.

✓ *2/12/56* ★ Karl Fridrikh Gauss, on the centenary of his death (1855-1955). Collection of essays under the general editorship of Academician I. M. Vinogradov. Izdat. Akad. Nauk SSSR, Moscow, 1956. 311 pp. 11 tables. A short scientific biography by Vinogradov is followed by five essays, by B. N. Delaunay, A. P. Nordin, A. I. Markusevich, B. V. Gnedenko and M. F. Subbotin respectively, dealing with the contributions of Gauss to Number Theory, Geometry, Analysis, Probability and Astronomy. There is no index or bibliography.



ONEDENKO, B.V.; POGREBYSSKIY, I.B.

Development of mathematics in the Ukraine. Ist.-mat.issl.no.9:  
403-426 '56. (MIRA 9:9)  
(Ukraine--Mathematics)

G N E D E N K O B V

SUBJECT USSR/MATHEMATICS/History of mathematics CARD 1/1 PG - 635  
 AUTHOR GNEDENKO B.V., GICHMAN I.I.  
 TITLE The development of the theory of probability in the Ukraine.  
 PERIODICAL Istoriko-mat. Issledovanija 2, 477-536 (1956)  
 reviewed 3/1957

This report reaches from the beginning, beginning with A.F.Pawlovskij (1821), M.E. Waščenko-Zacharčenko (1863) until the present time. The more the development advances the more difficult it is to represent it in its limitation to the Ukraine. Thus partially the progresses of probability theory in the whole Russia are considered. To the period of the beginning there belong, beside of the above mentioned scientists, also W.P.Ermarkov and M.A.Tichoman-drizkij. The "classical period" begins with the papers of P.L.Čebyšev and A.A.Markov. Then a less well-known paper due to I.W.Sleščinskij is reviewed in which in connection with the error theory already the cosine transformation of a straight density of distribution is used. After a short acknowledgement of the work of A.M.Liapunov this part of the report especially treats the papers of S.N.Bernštejn. Finally the author reviews on papers of E.E.Sluzkij. The last part describes the development since 1930. The literature restricts to Ukrainian papers only.

GNEDENKO, B.V.; POGREBYSSKIY, I.B.

Evgenii Iakovlevich Remez; on the 60th anniversary of his birth.  
Ukr.mat.zhur. 8 no.2:218-222 '56. (MLA 9:8)  
(Remez, Evgenii Iakovlevich, 1896-)  
(Bibliography--Mathematics)

3 NYEDE...

POGREBIS'KII, I.B., kandidat fiziko-matematichnykh nauk; GNYEDENKO, B.V.,  
akademik, glavnyy redaktor; LISENKO, F.K., redaktor

[Modern calculating machines] Suchasni obchysliuval'ni mashyny.  
Kyiv, 1957. 37 p. (Tovarystvo dlia poshyrennia politychnykh i  
naukovykh znan' Ukrain's'koi RSR. Ser.4, no.2) (MLRA 10:8)

1. Akademiya nauk URSS (for Gnyedenko)  
(Calculating machines)

*Gnedenko B.V.* PHASE I BOOK EXPLOITATION 139

Gnedenko, Boris Vladimirovich, and Khinchin, Aleksandr Yakovlevich

Elementarnoye vvedeniye v teoriyu veroyatnostey (Elementary Introduction to the Theory of Probabilities) 4th ed. Moscow, Gostekhizdat, 1957. 144 p. 25,000 copies printed.

Ed.: Orlov, V.B.; Tech. Ed.: Ostroumova, R.P.

PURPOSE: This book is intended to acquaint persons who have no higher education with the fundamentals of the theory of probabilities and its application.

COVERAGE: The monograph is an elementary presentation of the fundamentals of the theory of probabilities, illustrated by practical examples. No Soviet personalities are mentioned. There are no references.

TABLE OF  
CONTENTS:

Introduction to First Edition	5
Introduction to Second and Fourth Editions	6

Card 1/5

Elementary Introduction to the Theory of Probabilities 139

PART I. PROBABILITIES

Ch. 1. Probabilities of Events	7
1. The concept of probability	7
2. Impossible and certain events	11
3. Problems	12
Ch. 2. Addition Law of Probability	15
4. Derivation of the addition law of probability	15
5. Complete system of events	18
6. Examples	21
Ch. 3. Conditional Probability and Multiplication Law	23
7. Concept of conditional probabilities	23
8. Derivation of the multiplication law of probabilities	26
9. Independent events	28

Card 2/5

Elementary Introduction to the Theory of Probabilities	139
Ch. 4. Conclusions From the Addition and Multiplication Laws	34
10. Derivation of certain inequalities	34
11. The formula of complete probability	36
12. Bayes' formula	40
Ch. 5. Bernoulli Trials	47
13. Examples	47
14. Bernoulli's formulas	50
15. The most probable number of successes	53
Ch. 6. Bernoulli's Theorem	60
16. Content of Bernoulli's Theorem	60
17. Proof of Bernoulli's Theorem	62
PART 2. RANDOM VARIABLES	
Ch. 7. The Random Variable and the Law of Distribution	69
18. The concept of the random variable	69
19. The concept of the distribution law	71
Card 3/5	

Elementary Introduction to the Theory of Probabilities	139
Ch. 8. Mean Values	
20. Determination of the mean value of a random variable	76
Ch. 9. Mean Value of a Sum and a Product	76
21. Theorem concerning the mean value of a sum	87
22. Theorem concerning the mean value of a product	87
Ch. 10. Dispersion and Mean Deviation	91
23. Insufficiency of mean value for a random variable characteristic	94
24. Different methods of measurement of a random variable dispersion	94
25. Theorem on standard deviation	96
Ch. 11. Law of Large Numbers	103
26. Chebyshev's inequality	109
27. Law of large numbers	109
28. Proof of the law of large numbers	111
	113

Card 4/5



Elementary Introduction to the Theory of Probabilities	139
Ch. 12. Normal Distribution Laws	
29. Statement of a problem	117
30. The concept of the distribution curve	117
31. The properties of normal distribution curves	119
32. Solution of problems	122
Conclusion	130
Appendix. Tables of values of function $\Phi(a)$	138
AVAILABLE: Library of Congress (QA273.G57)	143

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card 5/5

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16(2)

PHASE I BOOK EXPLOITATION CZECH/2556

Conference on Information Theory, Statistical Decision Functions,  
Random Processes. 1st, Liblice, 1956.

Transactions. Prague, Czechoslovak Academy of Sciences, 1957.  
354 p. 1,000 copies printed.

Sponsoring Agency: Československá Akademie Věd. Sekce Technická.

Reviewers: Václav Dupač and Miloslav Jiřina; Scientific Ed.:  
Jaroslav Kožešník, Corresponding Member, Czechoslovak Academy of  
Sciences; Resp. Ed.: Ludek Böhm; Tech. Ed.: František  
Končický.

PURPOSE: This book is intended for specialists interested in in-  
formation theory and related subjects.

COVERAGE The book contains papers read at the First Prague Con-  
ference on Information Theory, Statistical Decision Functions,  
and Random Processes, held on November 28 - 30, 1956. The Con-

Card 1/5

Conference on Information Theory (Cont.)

CZECH/2556

ference was sponsored by the Czechoslovak Academy of Sciences and organized by the Institute of Radio Engineering and Electronics. The papers discuss various mathematical approaches to the problems of communications: information theory, probabilistic properties of communication, stochastic properties of communication, entropy, transformations of stochastic properties, statistical decision functions, randomized functional analysis, etc. Participants from China, Germany, Poland, Sweden, the United States, and the Soviet Union were present at the Conference. Of the 21 articles in the book, 14 are in English, 4 in French, 2 in German, and 1 in Russian.

TABLE OF CONTENTS:

Preface	5
Blackwell, D. (USA). The Entropy of Functions of Finite-State Markov Chains	13
Gnedenko, B.V. (USSR). On Certain Soviet Work on Information Theory Card 2/5	21

Conference on Information Theory (Cont.)

CZECH/2556

Hansson, H. (Sweden). A Display of Information Theory Problems Concerning Telephone Transmission	29
<u>Rajski, C.</u> (Poland), The Selectivity of the Parametric Tests	33
Rajski, C. The Bayes Rule and Entropy	35
<u>Prouza, L.</u> (Czechoslovakia), Note on Linear Prediction by Means of Learning Filters	37
<u>Driml, M. and A. Spacek,</u> (Czechoslovakia), Continuous Random Decision Processes Controlled by Experience	43
<u>Hanš, O.</u> (Czechoslovakia). Generalized Random Variables	61
Hanš, O. Random Fixed Point Theorems	105
Hanš, O. Inverse and Adjoint Transforms of Linear Bounded Random Transforms	127
Card 3/5	

Conference on Information Theory (Cont.)

CZECH/2556

Hanš, O. Almost Sure Convergence Theorem for Random Schwartz Dis-  
tributions 135

Nedoma, J. (Czechoslovakia). Note on Generalized Random Variables 139

Pérez, A. (Czechoslovakia). Generalized Concepts of Uncertainty, of  
Entropy and of Information From the Point of View of the Theory of  
Martingales 183

Pérez, A. On Information Theory in the Case of an Abstract  
Alphabet 209

Pérez, A. On the Convergence of Uncertainty, Entropy, and Informa-  
tion Samples Toward Their True Values 245

Špaček, A. (Czechoslovakia). An Elementary Experience Problem 253

Špaček, A. Extension of Probabilistic Transformations 259

Ullrich, M. (Czechoslovakia). Some Theorems on Random Schwartz Dis-

Card 4/5

REMEZ, Yevgeniy Yakovlevich; GNEDENKO, B.V., akademik, otvetstvennyy  
redaktor; POLONSKIY, I.L., redaktor izdatel'stva; KHYLOVSKAYA, N.S.,  
tekhnicheskoy redaktor

[General calculation methods of Chebyshev approximation] Obshchie  
vychislitel'nye metody Chebyshevskogo priblizheniya; zadachi s lineinymi  
vkhodiaschimi veshchestvennymi parametrami. Kiev, Izd-vo Akad.  
nauk USSR, 1957. 454 p. (MIRA 10:5)

1. AN USSR. (for Gnedenko)  
(Approximate computation)

PALLADIN, O.V., red.; SEMENENKO, M.P., akademik, red.; SHCHERBAN', O.N.,  
akademik, red.; GNEDENKO, B.V. [Hniedenko, B.V.], akademik, red.;  
DELIMARSKIY, Yu.K. [Delimars'kyi, IU.K.], akademik, red.; KAVETSKIY, R.Ye.  
[Kavets'kyi, R.IE.], akademik, red.; KHRENNOV, K.K. [Khrienov, K.K.],  
akademik, red.; KOROID, O.S., kand.ekon.nauk, red.; GUDZENKO, P.P.  
[Hudzenko, P.P.], kand.ist.nauk, red.; SHIKAN, V.L., red.  
izd-va; RAKHLINA, N.P., tekhn.red.

[Development of science in the Ukraine during the past 40 years]  
Rozvytok nauky v Ukraini'kii'RSR za 40 rokiv. Kyiv, 1957. 529 p.  
(MIRA 11:3)

1. Akademiya nauk URSR, Kiyev (for Semenenko, Shcherban', Gnedenko,  
Delimarskiy, Kavetskiy, Khrenov)  
(Ukraine---Science)

ONEDENKO, B.; POGREBYSSKIY, I.

Letter to the editors of "Istoriko-matematicheskije issledovaniia",  
Ist.-mat. issl. no.10:766 '57. (MIRA 11:1)  
(Ukraine--Mathematics)



GNEDENKO, B.V.

~~\_\_\_\_\_~~  
A month with the mathematicians of the Rumanian People's  
Republic. Ukr.mat.shur. 9 no.1:111-112 '57. (MLRA 10:5)  
(Rumania--Mathematics--Study and teaching)

Gooden K, B. V.

**AUTHOR: GNEDENKO, B. V.**

42-6-17/17

**TITLE:** First Conference of the Ukrainian Mathematicians (Pervoye soveshchaniye matematikov Ukrainy)

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1957, Vol.12, Nr.6, pp.215-220 (USSR)

**ABSTRACT:** The conference of May 16-18, 1957 had only a restricted scientific program (7 synoptical lectures). The conference mainly was devoted to organizing questions, e.g. foundation of an Ukrainian mathematical society, introduction of municipal mathematical seminars, mathematical periodical for pupils. In the background of all these questions there was the effort to advance and organize the mathematical life everywhere (pupils, students, academicians in the managements, dotsents of universities). As an example of a scientific institute working modelly for the interest of the universality, the Institute of Advanced Study, Princeton, U.S.A. is mentioned. Among the resolutions passed by the conference the following one seems to be interesting: foundation of a museum for computing machines. Participators: ca. 300 persons.

**AVAILABLE:** Library of Congress  
Card 1/1

GLUSHKOV, V.M.; ONEDENKO, B.V.

Electronic calculating machines. Visnyk AN URSR 28 no.9:3-10,  
S '57. (MIRA 11:1)

(Electronic calculating machines)

GNEDENKO, B.V.

The First Conference of Ukrainian Mathematicians. Visnyk AN  
URSR 28 no.10:69-72 0 '57. (MIRA 10:12)  
(Ukraine--Mathematics)

GNEDENKO, B.V.

Soviet mathematics during 40 years. Visnyk AN URSS 28 no.11:29-41  
N '57. (MIRA 10:12)

(Mathematics--History)

— B V  
GNEDENKO, B.P. [Hniedenko, B.V.], akademik; OAVRILYUK, V.T. [Havryliuk, V.T.].

International connections of the Institute of Mathematics of the  
Academy of Sciences of the Ukrainian S.S.R. Visnyk AN URSR 29 no.3:  
66-67 Mr '58. (MIRA 11:5)

1. AN URSR (for Gnedenko).  
(Academy of Sciences of the Ukrainian SSR)

GLADSTON, B.V., Prof., ul. Verkhovna St., K. 10, Kiev.

"On the Limit Theorems of Probability Theory," (Section IV)  
paper submitted for Eleventh Intl Congress of Mathematicians, Edinburgh, Scotland,  
14-21 Aug 58.

OSTROGRADSKIY, Mikhail Vasil'yevich; SMIRNOV, V.I., akademik, red.;  
GNEDENKO, B.V.; MARON, I.A., dotsent; ANTROPOVA, V.I., dotsent;  
POGREBYSSKIY, I.B., dotsent; POLYAKHOV, N.N., prof.; REMEZ, Ye.Ya.,  
prof.; SMIRNOV, V.I., akademik; FIKHTENGOL'TS, G.M., prof.;  
TRAVIN, N.V., red.izd-va; PEVZNER, P.S., tekhn.red.

[Selected works] Izbrannye trudy. Red. V.I. Smirnova. Stat'ia  
B.V. Gnedenko i I.A. Marona. Primechania V.I. Antropovoi i dr.  
Izd-vo Akad.nauk SSSR, 1958. 583 p. (MIRA 11:12)

1. Deyatvitel'nyy chlen AN Ukrainsk v SSR (for Gnedenko).  
(Calculus) (Mathematical physics) (Mechanics)



(S NEBENK) (S V)

p 3

16(1)

PHASE I BOOK EXPLOITATION

SOV/1366

Istoriko-matematicheskoye issledovaniya, vyp. 11 (Research in Mathematical History, Nr 11) Moscow, Fizmatgiz, 1958. 792 p. 3,000 copies printed.

Eds. (Title page): Rybkin, G.F. and Yushkevich, A.P.; Ed. (Inside book): Konoplyankin, A.A.; Tech. Ed.: Murashova, N. Ya.

**PURPOSE:** This book is intended for mathematicians and others interested in the history of mathematics, and may serve as the basis for a suitable university text on the history of mathematics, thereby filling the most serious gap in Soviet mathematical literature.

**COVERAGE:** This book contains reports made by members of the section on the history of mathematics at the Third All-Union Mathematical Congress which discussed problems of the history of mathematics and various articles on the significance of the history of mathematics

Card 1/8

Research in Mathematical History (Cont.)

SOV/1366

for mathematics itself and for the other sciences. There are also four articles on the history of mathematics in Czechoslovakia and Rumania, an article on the investigation of the algebraic roots of differential calculus in connection with a study of the mathematical writings of K. Marx, and an article on the work done on negative numbers by the Arabian mathematician, Abu-l-Wafa. A series of articles on various texts and documents connected with the history of mathematics, including a translation of the treatise De Configuratione Qualitatum by N. Oresme and two articles concerning it, concludes the book.

Card 2/8

Research in Mathematical History (Cont.)

SOV/1366

TABLE OF CONTENTS:

From the Editors

7

PAPERS SUBMITTED BY THE SECTION ON THE HISTORY  
OF MATHEMATICS OF THE THIRD ALL-UNION MATHEMATICAL CONGRESS

Yushkevich, A.P. (Moscow). On New Work in the USSR on the  
History of Mathematics 11

Gnedenko, B.V. (Kiyev). On Certain Problems of the History of  
Mathematics 47

Yanovskaya, S.A. (Moscow). From the History of Axiomatics 63

Norden, A.P. (Kazan'). Problems on the Foundations of  
Geometry in the Works of N.I. Lobachevskiy 97

Card 3/8

GNOSENKO, B.V.

"Calculating probabilities" [in Hungarian] by A. Renyi. Reviewed by  
B.V. Gnosenko. Teor. veroiat. 1 ee prim. 3 no.1:115-116 '58.  
(Probabilities) (MIRA 11:3)  
(Renyi, A.)

GNEDENKO, B.V.

~~Theory of probability and its applications~~ "Theory of probability and its applications" [in Romanian] by  
O. Onicescu, G. Mihoc, C.T. Ionescu Tulcea. Reviewed by B.V.  
Gnedenko. Teor. veroiat. i ee prim. 3 no.1:117-118 '58. (MIRA 11:3)  
(Probabilities)  
(Onicescu, O.) (Mihoc, G.) (Ionescu Tulcea, C.T.)

GNEVDENKO, B.V.

"Introduction into mathematical statistics" [in German] by  
L. Schmetterer. Reviewed by B.V. Gnedenko. Teor. veroiat. i ee  
prim. 3 no.1:118-120 '58. (MIRA 11:3)  
(Mathematical statistics)  
(Schmetterer, L.)

GNEDENKO, B.V.

"Statistical analysis of stationary time series" [in English] by  
U. Grenander, M. Rosenblatt. Reviewed by B.V.Gnedenko. Teor.  
veroiat. i ee prim. 3 no.4:475-477 '58. (MIRA 11:12)  
(Time-series analysis) (Grenander, U.) (Rosenblatt, M.)

AUTHOR: Gnedenko, B.V., Member of the AS UkrSSR 21-58-5-1/28

TITLE: On a Problem of Mass Service (Ob odnoy zadache massovogo ob-sluzhivaniya)

PERIODICAL: Dopovidi Akademii nauk Ukrain'skoi RSR, 1958, Nr 5, pp 477-479 (USSR)

ABSTRACT: This article is the answer to a question raised by engineers in the gas and electric power industries. The problem in question consists in the following: there is a great number of power consumers; the intensity of consumption by each consumer at any instant of time is a random quantity; what is the total consumption of gas or electric power at any particular instant? Under some very general assumptions, the solution of this problem can be found by applying the n-dimensional theorem of Lyapunov [Ref 1]. The author proves that the total consumption at arbitrary instants  $t_1, t_2, \dots, t_s$  for any integer  $s$  is a random vector whose distribution is close to normal. For a particular case when  $s = 1$ , the expression obtained agrees with that derived by Engineer B.S. Meshel' in an empirical way, by handling extensive statistical data as to consumption of electric power. The author remarks that his result is applicable only in cases

Card 1/2



On a Problem of Mass Service

21-58-5-1/28

when there is a considerable number of consumers.  
There is 1 Soviet reference.

ASSOCIATION: Institut matematiki AN UkrSSR (Institute of Mathematics AS  
UkrSSR)

SUBMITTED: January 18, 1958

NOTE: Russian title and Russian names of individuals and institu-  
tions appearing in this article have been used in the trans-  
literation.

1. Hydroelectric power systems--Statistical analysis

Card 2/2

GNEDENKO, B.V. (Kiyev)

Certain problems of the history of mathematics. Ist.-mat.  
issl. no.11:47-62 '58. (MIRA 12:1)  
(Mathematics)

GNEZDENKO, B.V. (Kiyev); POGREBYSSKIY, I.B. (Kiyev)

History of mathematics and its importance for mathematics and  
other sciences. Ist.-mat.issl. no.11:441-460 '58.

(MIRA 12:1)

(Mathematics)

AUTHOR: GNEDENKO, B. 41-1-12/15  
TITLE: Republican Conference on the Questions of the Statistical  
Methods of Analysis and of Control of Industrial Plants.  
(Respublikanskaya konferentsiya po voprosam statisticheskikh  
metodov analiza i kontrolya proizvodstva)  
PERIODICAL: Ukrainskiy Matematicheskiy Zhurnal, 1958, Vol. 10, Nr 1, pp. 103  
(USSR)  
ABSTRACT: This is a report on the conference which took place on  
14 - 15 June 1957. There were more than 100 participants:  
chief engineers of most important industrial plants and col-  
laborators of scientific institutes. 8 lectures were given.  
Conclusion: 1.) Foundation of an Ukrainian Seminar on sta-  
tistical methods in the industry. 2.) Accelerated publica-  
tion of text-books on the statistical methods for current  
control and supervision of fabrication.  
AVAILABLE: Library of Congress  
1. Statistical analysis-Reports-Industry

Card 1/1

AUTHORS: Gnedenko, B.V., and Pogrebyasskiy, I.B. SOV/42-13-5-13/15  
TITLE: Ten Years of "Historical-Mathematical Investigations" (Desyat' let "Istoriko-matematicheskikh issledovaniy")  
PERIODICAL: Uspekhi matematicheskikh nauk, 1958, Vol 13, Nr 5, pp 229-234 (USSR)  
ABSTRACT: This is a review on the merits of the periodical "Istoriko-matematicheskije issledovaniya" (edition 3000-4000 copies). Aims of the periodical: 1) Communications on scarcely known questions of the (especially Russian) history of mathematics, 2) examination and improvement of the older interpretations in mathematics. The authors regret that the papers published in the periodical are somewhat one-sided; mostly the Russian mathematicians are treated while the western mathematics as well as the mathematics of Japan, of Rome and the Middle Ages etc. is scarcely mentioned.

Card 1/1

SHEDENKO, E. V. (Riev)

"On one Problem of Mass Servicing,"

paper to be submitted for the Second Prague Conference on Information Theory, Statistical Decision Functions, and Random Processes, Liblice (near Prague) CSR, 1-6 June 1959.

CH. D. A. K. P. I.

16(0) PLANE I BOOK EXPLOITATION SOV/3177

Matematika v SSSR za srok let, 1917-1957, to 1: Osnovnye stat'i (Mathematics in the USSR for Forty Years, 1917-1957), Vol. 1: Review Articles) Moscow, Fizmatgiz, 1959. 1002 p. 5,500 copies printed.

Eds: A. O. Kurosh, (Chief Ed.), V. I. Ityutskov, V. G. Matyansky, Ye. B. Dynkin, G. Ye. Shilova, and A. P. Yumerskiy; Ed. (Inside book): A. P. Lapto; Tech. Ed.: S. M. Anisimov.

PURPOSE: This book is intended for mathematicians and historians of mathematics interested in Soviet contributions to the field.

COVERAGE: This book is Volume I of a major 2-volume work on the history of Soviet mathematics. Volume I surveys the chief contributions made by Soviet mathematicians during the period 1917-1957; Volume II will contain a bibliography of major works since 1917 and biographic sketches of some of the leading mathematicians. This work follows the tradition set by two earlier works: Matematika v SSSR za pyatnadtsat' let (Mathematics in the USSR for 15 Years) and Matematika v SSSR za tridtsat' let (Mathematics in the USSR for 30 Years). The book is divided into the major divisions of the field, i.e., algebra, topology, theory of probabilities, functional analysis, etc., and contains tributions and outstanding problems in each discipline. Listing of some 1000 Soviet mathematicians is included with references to their contributions in the field.

Glukhan, I. I., and L. V. Gnedenko. Mathematical Statistics 797  
Gavurin, M. E., and L. V. Kantorovich. Approximation and Numerical Methods 809

# Introduction

1. Iterative methods of solving linear problems 812
2. Gradient methods 812
3. Variational methods 812
4. Method of moments 812
5. General theories of approximation methods 812
6. Methods of solving nonlinear problems 812
7. Theory of approximation 812
8. Problems of approximation 812
9. Problems of linear algebra 812
10. Integral equations 812
11. Ordinary differential equations 812
12. Difference methods for partial differential equations 812
13. Approximation methods of conformal mappings 812
14. Extremal planning-production problems and linear programming 812
15. Tables 812

OSTROGRADSKIY, Mikhail Vasil'yevich [deceased]; SHTOKALO, I.Z., akademik, otv. red.; BOGOLYUBOV, N.N., akademik, otv. red. toma; GNEDENKO, B.V., akademik, red.; ISHLINSKIY, A.Ya., akademik, red.; REMEZ, Ye.Ya., ~~prof.~~, SAVIN, G.N., akademik, red.; SOKOLOV, Yu.D., red.; SMIRNOV, V.I., akademik, red.; YUSHEVICH, A.P., prof., red.; POOREBYSSKIY, I.B., dotsent, red.; SHTELIK, V.G., red. i sd-v; RAKHLINA, N.P., tekhn. red.

[Collected works in three volumes] Polnoe sobranie trudov v trekh tomakh. Kiev, Izd-vo Akad. nauk USSR. Vol. 1. 1959. 310 p.  
(MIRA 12:8)

1. AN USSR (for Shtokalo, Gnedenko, Ishlinskiy, Savin). 2. Chlen-korrespondent AN USSR (for Remez, Sokolov).  
(Science)



GHEDENKO, B.V. [Ghedenko, B.V.]

L. Euler's relations on the probability theory, the theory of the  
processing of observation results, demography, and insurance. Ist.-  
mat. zh. 1:71-76 '55. (MIA 14:2)

(Probabilities)

(Demography)

(Insurance, Social)

SHEDLIKO, B.V. [Hnieden'ko, B.V.]

Development of the theory of probability in the works of O.K. Liapunov.  
Ist.-mat. zbir. 1:133-139 '59. (MIRA 14:2)  
(Probabilities)

8(3)

1959-59-2-4/25

AUTHORS: ~~Gnadenko, D. V.~~, Academician of the Academy of Sciences, UkrSSR, Meshel', B. S., Engineer (Kiyev)

TITLE: On the Method of Determining the Design Loads of Industrial Plants (O metodike opredeleniya raschetnykh nagruzok promyshlennykh predpriyatiy)

PERIODICAL: Elektrichestvo, 1959, Nr 2, pp 13-16 (USSR)

ABSTRACT: In the last years the design loads of industrial networks are commonly calculated by means of methods of the probability theory. A provisional analysis of three methods of calculating the electrical loads of industrial networks is given.  
1) The works of G. M. Kayalov (Refs 3, 4). He makes use of methods of the probability theory and says that the total load is to be considered as a random process and calls it a stationary random process. He tries to comprehend by formulae a great number of factors effecting the load.  
2) M. K. Kharchev (Ref 2) refers to the necessity to subdivide the electric-energy consumers into groups of equal performance. He introduces two important factors: factor of exploitation of the installed capacity during the maximum loaded shift and maximum factor. It is shown that the ideas of Kharchev are

Card 1/2

SOV/103-59-2-4/25

On the Method of Determining the Design Loads of Industrial Plants

very dubious and do not correspond with the reality.

3) The one of the authors - Meshel' - tries to pay no regard to the influence of the single factors or factor groups on the load but to consider only their total influence by methods of mathematical statistics. What is deemed precious in this method is the circumstance that for the calculation two parameters only must be regarded - the mean load  $\bar{P}$  and the dispersion  $\sigma^2$ . Finally it is stated that the method of Kharchev has been developed not before the last years and its application has therefore not been studied sufficiently. No experience too is available of the application of the method of Kayalov nor of the statistical method. For this reason it is not possible for the present to choose one of the mentioned methods. There are 7 Soviet references.

SUBMITTED: August 9, 1958

Card 2/2

16(1)

SOV/21-59-4-1/27

AUTHOR: Gnedenko, B.V., Academician AS Ukr SSR

TITLE: On a Generalization of Erlang's Formulas

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR, 1959, Nr 4, pp 347-350 (USSR)

ABSTRACT: Erlang's formulas were formulated long ago [Ref 1] and had been intended for use in the study of work conditions of devices of automatic telephone stations. Since then, the field of their application has been considerably widened, especially by works of R. Fortet [Ref 2], B.A. Sevast'yanov [Ref 3] and L. Takacs [Ref 4]. This article extends the applicability of Erlang's formulas to a case when devices (in this case the telephone lines) may get out of order and require a certain time for repairs. A case is examined when the demands are served by "n" devices and the devices are served by "r" number of operators. The inflow of demands and the flow of impairments of devices are assumed to be simple

Card 1/3

On a Generalization of Erlang's Formulas

30V/21-59-4-1/27

Poisson flows. The time of attending the devices and serving the demands is assumed to be exponential. The final result is given by formulas (3), where  $P_k$  is probability of impairment,  $P_k(t)$  is probability that at a time "t", a "k" number of devices is at work,  $\pi_k(t)$  is the probability of there being a "k" number of devices out of order at a time "t",  $\mu$  is parameter. Other designations are standard mathematical. In the conclusion the article considers two special cases: 1) when the devices can not get out of order, 2) when the impaired devices are brought in order right away. The results are shown by formulas (1) and (4). There are 4 references, 1 of which is

Card 2/3

On a Generalization of Erlang's Formulas

SOV/21-57-4-1/27

Soviet, 1 English, 1 French and 1 Hungarian.

ASSOCIATION: Institut matematiki AN UkrSSR (Institute of Mathematics of the AS UkrSSR)

SUBMITTED: December 23, 1958, by the author.

Card 3/3

GNEDENKO, B.V.

Liapunov's works pertaining to the probability theory. Ist.-mat.  
issl. no.12:135-160 '59. (MIRA 1):11)  
(Probabilities)



13

16(1), 16(2)

AUTHOR: Gnedenko, B.V.

SOV/52-4-2-13/13

TITLE: T.W.Anderson, Introduction to Multivariate Statistical Analysis,  
New York, Wiley, 1958

PERIODICAL: Teoriya veroyatnostey i yeye primeneniya, 1959, Vol 4, Nr 2,  
pp 247-248 (USSR)

ABSTRACT: This is a favourable criticism of the above mentioned book with  
a short summary of the contents of the single chapters. The  
book is recommended for translation into the Russian Language.

Card 1/1

16(1)

AUTHOR:

Gnedenko, B.V.

SOV/52-4-3-10/10

TITLE:

Review of M.Fish, Theory of Probability and Mathematical Statistics, Warszawa, 1958, 530p. 2. Edition

PERIODICAL:

Teoriya veroyatnostey i yeye primeneniye, 1959, Vol 4, Nr 3, pp 365-367 (USSR)

ABSTRACT:

This is a favourable review of the above book. The book consists of 17 chapters, three of which are new: Markov chains, Stochastic processes, Theory of Series. The author mentions that at the same time the book is published in German language in Berlin.

Card 1/1

USCOMM-DC-61,657

S/044/63/000/001/051/053  
A060/A000

AUTHOR: Gnedenko, B. V.

TITLE: Some remarks on two papers by D. I. Barrer

PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1963, 44, abstract IV201  
(Bul. Inst. politehn. Iasi", 1959, v. 5, no. 1 - 2, 111 - 118  
summaries in Italian, Rumanian)

TEXT: The author discusses certain new formulations of problems of the theory mass servicing considered earlier by Barrer (1958, 7034). In the simplest situation for the theory of mass servicing there are:  $n$  service devices, the simplest request flow, exponential distribution of service time, - the new element is the introduction of the following type of constraints: the time during which a request may find itself in a queue, or the total dwell time in the system bounded by a constant number  $\tau$ . The problem is also raised of studying certain other service systems analogous to those considered by Barrer. In conclusion it is noted that the results set forth are only the beginning of series of further investigations".

Yu. I. Maksimov

[Abstracter's note: Complete translation]

Card 1/1

GNEDENKO, B.V. [Hniedenko, B.V.], akademik

Mathematics in natural sciences. Nauka i zhvtia 9 no.4:17-19  
Ap '59. (MIRA 12:7)

1. AN USSR.  
(Mathematics) (Science)

GNEDENKO, B.V. [Hniedenko, B.V.], akademik

We carried out our dreams. Nauka i zhyttia 9 no.10:5  
0 '59. (MIRA 13:2)

1. AN USSR.

(Lunar probes)

GNEDENKO, B.V. [Hniedenko, B.V.], akademik; SHKABARA, K.O., kand.tekhn.  
nauk

Cybernetics. Nauka i zhyttia 9 no.12:9-11 D '59.(MIRA 13:4)

1. AN USSR (for Gnedenko).  
(Cybernetics)

1(1)

AUTHOR: Gnedenko, E.V.

SDV/41-11-2-1/17

TITLE: Investigations on Probability Theory and Mathematical Statistics  
in the System of the AS Ukr SSR

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1959, Vol 11, Nr 2, pp 123-136  
(USSR)

ABSTRACT: On the occasion of the 25 years existence of the Mathematical  
Institute of the Academy of Sciences Ukr SSR the author gives a  
survey on the investigations on probability theory and statistics  
carried out by this institute and other institutions. The  
author reviews in brief the most essential results of S.N.Bern-  
chteyn, N.I.Akhiyezer, N.N.Bogolyubov, E.V.Gnadenko, B.S.Keshel',  
V.S.Korolyuk, Ye.L.Rvacheva, I.N.Kovalenko, L.P.  
Nizhnik, Ye.L.Yushchenko, M.A.Krasnosel'skiy, S.G.Kreyn, M.G.  
Kreyn, N.M.Krylov, D.G.Meyzler, O.S.Parasyuk, V.S.Mikhalevich,  
M.I.Pol'skiy, G.F.Selyavin, G.N.Sakovich, and Ye.Ye.Slutskiy.  
The author mentions I.M.Lifshits, Corresponding Member, M.M.  
Afanac'yev, A.P.Lyapunov, T.F.Osipovskiy, A.Ya.Khinchin,

Card 1/2

Investigations on Probability Theory and Mathematical Statistics in the System of the AS Ukr SSR SOV/41-11-2-1/17

A.N.Kolmogorov, P.L.Chebyshev, Yu.V.Frobenius, V.V.Petrov,  
Yu.A.Rozanov, Yu.V.Lianik, V.P.Skitovich, R.L.Dobrushin, N.A.  
Sapogov, E.V.Shirokorad, S.M.Prodi, V.G.Parinich, M.I.Kovalenko,  
V.N.Yaroshenko, N.V.Yarovitskiy, O.V.Sarmanov, V.A.Mikhaylov,  
and M.V.Itukh.

There are 83 Soviet references.

SUBMITTED: March 16, 1959

Card 2/2



GNEDENKO, Boris V.

"On some aspects of the development of mass operations."

report to be submitted at the Annual Meeting of the German Society for Applied Mathematics and Mechanics, Freiberg/Saxony, 20-23 Apr 1960.

GNEDENKO, B.V.: KOROLYUK, V.S.; and SKOROKHOL, A.V.

"On Asymptotic Distributions in the Theory of Probability."

[Kiev State University imeni T.G.Shevchenko]

report to be presented 27 June 1960 at the 4th Symposium on Mathematics Statistics and Probability - Berkeley, California, 20 Jun- 30 Jul 1960.

PHASE I BOOK EXPLOITATION SOV/4981

Soveshchaniye po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 1958

Trudy Vsesoyuznogo soveshchaniya po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 19-25 sentyabrya . 38 g. (All-Union Conference on the Theory of Probability and Mathematical Statistics. Held in Yerevan 19-25 September, 1958. Transactions) Yerevan, Izd-vo AN ASSR, 1960. 291 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR.

Editorial Staff: G.A. Ambartsumyan, B.V. Gnedenko, Ye.B. Dynkin, Yu.V. Linnik and S. Kh. Tumanyan; Ed. of Publishing House: A.G. Silquni; Tech. Ed.: M.A. Kaplanyan.

PURPOSE: The book is intended for mathematicians.

COVERAGE: The book contains 41 articles submitted to the Conference and dealing with the theory of probability and mathematical statistics. Some of the articles are the papers read at the Conference and edited for publication, while others outline the theses of papers which appeared or are scheduled to appear, wholly or in

Card 1/8

Card 2/8

GNEDENKO, B.; CHUDAKOV, N.

Georgii Petrovich Boev; obituary. Izv.vys.ucheb.sav.; mat. no.1:  
245-248 '60. (MIRA 13:6)  
(Boev, Georgii Petrovich, 1898-1959)

GNEDENKO, B.V.

Aleksandr Iakovlevich Khinchin; obituary. Teor. veroiat. i ee prim.  
5 no.1:3-6 '60. (MIRA 13:10)

(Khinchin, Aleksandr Iakovlevich, 1894-1959)

S/052/60/005/004/003/007  
G 111/ G 333

AUTHORS: Gnedenko, B. V., Kolmogorov, A. N., Prokhorov, Yu. V.,  
Sarmanov, O. V.

TITLE: On the Work of N. V. Smirnov in Mathematical Statistics  
(On the Occasion of his 60-th Birthday)

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, 1960, Vol. 5,  
No. 4, pp. 436-440

TEXT: On October 17, 1960 Nikolay Vasil'yevich Smirnov, Corresponding  
Member of the Academy of Sciences USSR, Professor, had his 60-th  
birthday.

The first group of his papers is devoted to non-parametric problems.  
He considers: the distribution of the criterion  $\omega^2$  of Mises, the  
deviations from the empiric curves, "criterion of Smirnov".

The second group deals with the properties of the terms of the  
variation series. For papers of this group N. V. Smirnov obtained  
the Stalin prize. The third group is devoted to probability theory.

The authors call special attention to the difficulty of the considered  
problems and the elegance of the solutions.

Card 1/2

GNEDENKO, B.V.; KOLMOGOROV, A.N.

Aleksandr Iakovlevich Khinchin; obituary. Usp. mat. nauk 15  
no.4:97-110 J1-Ag '60. (MIRA 13:9)  
(Khinchin, Aleksandr Iakovlevich, 1894-1959)

GNEVDENKO, B.V.; POGREBYSSKIY, I.B.

Review of "Mathematics in the USSR during the last forty years,"  
vols. 1 and 2. Usp.mat.nauk 15 no.5:235-236 S-O '60. (MIRA 13:10)  
(Mathematics)



GNEDENKO, B.V., akademik; KRASNOV, I.G.; BOYKO, F.K. (g. Pavlodar);  
MESHEL', B.S., inzh.

Draft of directives regarding the calculation of electric power  
loads in industrial enterprises. Prom.energ. 15 no.6:41-45  
Je '60. (MIRA 13:7)

1. AN USSR (for Gnedenko). 2. Proyektnyy institut Minstroya  
RSFSR (for Krasnov).  
(Electric engineering)

GNEDENKO, Boris Vladimirovich; KHINCHIN, Aleksandr Yakovlevich;  
SHIROKOVA, S.A., red.; KRYUCHKOVA, V.N., tekhn. red.

[Elementary introduction into the probability theory] Elemen-  
tarnoe vvedenie v teoriu veroiatnostei. Izd.5. Moskva, Gos.  
izd-vo fiziko-matem. lit-ry, 1961. 143 p. (MIRA 15:4)  
(Probabilities)

PHASE I BOOK EXPLOITATION

SOV/5618

Gnedenko, Boris Vladimirovich, Vladimir Semenovitch Korolyuk, and Yekaterina Logvinovna Yushchenko

Elementy programmirovaniya (Programming Elements) Moscow, Fizmatgiz, 1961.  
348 p. 25,000 copies printed.

Ed.: L. A. Solov'yeva; Tech. Ed.: N. Ya. Murashova.

PURPOSE: This textbook has been approved by the Ministry of Higher and Special Secondary Education of the RSFSR for schools of higher education. It may also be useful to members of scientific research institutes concerned with computer programming.

COVERAGE: The book contains directions on the programming of automatic digital computers. It reflects investigations made in the field of automation of programming, solutions of logical problems by automatic digital computers, and the operational method proposed by A. A. Lyapunov, Professor, whose lectures at the Moscow University suggested to the authors the basis for this textbook. No personalities are mentioned. There are 29 references, all Soviet (including 3 translations).

Card 4/5

GNEDENKO, Boris Vladimirovich; SHIROKOVA, S.A., red.; YERMAKOVA,  
Ye.A., tekhn. red.

[Course in the theory of relativity] Kurs teorii veroiat-  
nostei. Izd.3., perer. Moskva, Gos. izd-vo fiziko-matem.  
lit-ry, 1961. 406 p. (MIRA 15:2)  
(Relativity (Physics))

S/C44/62/000/006/095/127  
B166/B112

AUTHOR: Gnedenko, B. V.

TITLE: Some questions of cybernetics and statistics

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 43, abstract  
6V208 (Sb. "Kibernetiku na sluzhbu kommunizmu. v. I.", M. - L.,  
Gosenergoizdat, 1961, 55-71)

TEXT: In the introduction the author notes the penetration of mathematical methods into various branches of learning. In language within the reach of engineers the central problems of those branches of cybernetics with which the author has himself been direct dealing are set out. The logical path which led to the construction of a medical diagnostic machine and experience gained in its operation are described. The section entitled "Questions of the organization of production and the theory of mass service" discusses the calculation of automation lines and bunker capacity. The section entitled "Statistical questions of the reliability of control systems" deals with corrector codes and the design of reliable circuits from unreliable elements. Further, the most topical problems of linear

Card 1/2

Some questions of cybernetics ...

S/044/62/C00/006/095/127  
B166/B112

programming are enumerated, and questions of the theory of games are set out, with particular reference to coalition games. In conclusion, Markovian and steady-state processes are defined; it is noted that these closely approach all really observable processes. [Abstracter's note: Complete translation.]

Card 2/2

89683

S/144/61/000/001/003/004  
E031/E435

16.6106 (also 1031)

AUTHOR: Gnedenko, B.V., Academician AS UkrSSR, Doctor of  
Technical Sciences, Professor

TITLE: The Theoretical Probability Foundations of the  
Statistical Method of Calculating the Electrical  
Loading in Industrial Plants

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika,  
1961, No.1, pp.90-99

TEXT: This paper was presented at a meeting of the TsYeNTOEP  
Commission on Load, Kiyev, October 1959.

In many cases, projected installations adopt purely empirical  
approaches leading to a considerable divergence between calculated  
results and the loadings actually observed. This arises either  
through misapplication of the theoretical expressions or through  
the choice of inappropriate values for the parameters. The  
solution of the problems should be sought through a deeper  
understanding of the physical reality and the construction of a  
mathematical theory of calculation, supported by practical  
verification and an indication of the methods of calculation which

Card 1/4

The Theoretical Probability ...

89683

S/144/61/000/001/003/004  
E031/E435

would not present insuperable computing difficulties for the projected installation. In the past thirty years, attempts have been made to construct mathematical theories using the concepts and methods of the theory of probability. N.V.Kopytov was one of the first in the field (Ref.5) and both G.M.Kayalov and B.S.Meshel' have been working systematically since. Suppose that there are various units that consume the power  $P_k(t)$  at the time  $t$ , so that the total power  $P(t)$  is the sum of the individual power consumptions. The quantities  $P_k(t)$  have to be regarded as random functions and  $P(t)$  as a random function of a special kind. Kayalov proposed studying the graph of the total load as a stationary (in time) random process and applying correlation theory; Meshel' considers the problem of consumption as stationary but gaussian in character with independent increments in any time intervals. J.Palasti and L.Takacs (Ref.7) use complicated mathematical apparatus on the same approach. At the end of the nineteenth century, A.M.Lyapunov proved a theorem to the effect that under very wide conditions a random quantity which is the sum of a large number of independent random quantities, each of which has only an insignificant effect on the sum, has a nearly normal

Card 2/4



87683

S/144/61/000/001/003/004  
E031/E435

The Theoretical Probability ...

probability distribution. This theorem can be generalized to the case when the distribution  $P(t)$  has to be found at several moments of time. In practice, however, it is convenient to consider not the instantaneous power consumption, but the energy consumed in a time interval  $h$ . Meshel' (Ref.6) gives a fuller treatment. In going over to the energy distribution  $P(t,h)$  a certain amount of smoothing takes place. If we consider the standard deviation  $\sigma$  for the process  $P(t)$  over intervals of time  $h$  and  $H = hs$  where  $s$  is an integer, we find that  $\sigma(H) = \sqrt{s} \sigma(h)$ , but if we consider the standard deviation for  $Q(t,h) = P(t,h)/h$ , for the same time intervals, we have  $\bar{\sigma}(H) = \bar{\sigma}(h) / \sqrt{s}$ . The mean usable power and standard deviation may be calculated in a similar manner when the units absorbing the power are grouped. If the dependence of the usable power on different moments of time is important, then one of the methods which can be adopted is that of Kayalov (Ref.2) in which he considers the process of using energy to be a stationary Markov process. Use of the theoretical apparatus of probability theory solves all the problems arising in practical calculations of the

Card 3/4

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The Theoretical Probability ...

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E031/E435

loading. Kayalov's approach does not take account of the fact that the loading is the sum of a large number of components. If this is accepted, the loading can be considered as a normal stationary Markov process. There are 1 figure and 7 references: 6 Soviet and 1 non-Soviet.

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Card 4/4



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Mathematical parameters of ...

fixed-point system is used which is much simpler (than a floating-point one) and facilitates operation of the computer. With regard to digits 10 (2 decimal digits (approx. 40 binary) are used. The external memory is of large capacity, the internal memory has 2048 cells, out of which 512 belong to the backing store. Three types of memories are incorporated in the machine: 1) Permanent for storing the most frequently used constants and programs for computing elementary functions (sin, ln, x, etc.); 2) variable-access for the library of subroutines which are connected in last-of-need; 3) fast-access for program testing error correction, etc. Eleven digits are required for the coding of one address, a three address system of instructions was adopted. The elementary operations of the computer are as follows: a) Basic arithmetical operations, b) auxiliary arithmetical operation, c) logical operations, d) control operations, e) operations involving the external units (change of codes between the magnetic drum and the working memory, etc.), f) group operations, permitting encoding the cyclical processes in a convenient form. The group operations constitute one of the peculiar features of the computer "Kyyiv" - they are described in detail in a subsequent article (pp. 16-20). There are 9 Saw et al. references.

Card 2/2

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SOV/5371

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|-----|---|-----|
| 58. | Belyayev, Yu. K. "Ruled" Markov Processes and Their Application to Problems in the Theory of Reliability      | 309 |
| 59. | Bobrov, A. A., and D. Z. Arov. Flows of Random Events Without Aftereffect                                     | 325 |
| 60. | Bondareva, O. N. Existence of a Solution Coinciding With the Kernel in a Game of n Persons                    | 337 |
| 61. | Girsanov, I. V. Minimax Problems in the Theory of Diffusion Processes   | 339 |
| 62. | Gnedenko, B. V., Yu. K. Belyayev, and I. N. Kovalenko. Basic Trends of Investigations in the Theory of Queues | 341 |
| 63. | Kovalenko, I. N. On a Method in the Theory of Queues  | 357 |
| 64. | Kolchin, V. F. Some Problems in the Theory of Dynamic Games   | 350 |

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